

Case 3641***Ascalabotes sthenodactylus* Lichtenstein, 1823 (currently *Stenodactylus sthenodactylus*; Reptilia, Gekkota, GEKKONIDAE): proposed conservation of current usage of the specific name by designation of a neotype**

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Abstract. The purpose of this application, under Article 75.6 of the Code, is to conserve the usage of the specific name of *Stenodactylus sthenodactylus* (Lichtenstein, 1823) for a species of gecko from North Africa by designating a neotype to replace the lectotype. Prevailing usage of the name is threatened by the identity of the lectotype, which exhibits the characters of *Stenodactylus mauritanicus* Guichenot, 1850. It is proposed that the existing name-bearing type for the species *Stenodactylus sthenodactylus* (Lichtenstein, 1823) be set aside and a neotype be designated in accord with prevailing usage.

Keywords. Nomenclature; taxonomy; Reptilia; Gekkota; *Stenodactylus*; *Stenodactylus sthenodactylus*; *Stenodactylus mauritanicus*; elegant gecko; Sahara; North Africa.

1. *Ascalabotes sthenodactylus* was established by Lichtenstein (1823, p. 102) who mentioned 'Aegypt. et Nubia' as the type locality but did not provide information on the origin of the specimens examined or their whereabouts. Bauer & Günther (1991) and Bauer (2000) demonstrated that the nomen *Ascalabotes sthenodactylus* was based on specimens collected by Hemprich and Ehrenberg in Egypt and Nubia. In Bauer & Günther (1991), a specimen in the Museum für Naturkunde, Berlin, ZMB 437A, was designated as lectotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823.

2. *Stenodactylus mauritanicus* was described by Guichenot (1850, p. 5) based on at least three specimens: two specimens in the Muséum national d'Histoire naturelle (MNHN) collection, Paris, collected by Levaillant and Bravet in the vicinity of Oran, and one specimen collected by himself near Oran and now housed in the same collection. As discussed in more detail in Metallinou & Crochet (2013), these three specimens (MNHN 2339, 6768 and 6769) are all syntypes of *Stenodactylus mauritanicus* Guichenot, 1850.

3. Although *Stenodactylus mauritanicus* was often synonymized with *S. sthenodactylus* (starting with Anderson, 1898), numerous subsequent authors recognized the two forms as subspecies. All authors that did so referred to the eastern and xeric form as *sthenodactylus* and to the western or more mesic form as *mauritanicus* (Doumergue, 1901; Loveridge, 1947; Schmidt & Marx, 1956; Bons, 1957, 1959, 1960, 1972, 1975; Pasteur & Bons, 1960; Bons & Girot, 1962; Kluge, 1967; Salvador & Peris, 1975; Frankenberg, 1975, 1978; Werner, 1982, 1988; Geniez et al., 1992; Geniez & Geniez, 1993; Bons & Geniez, 1996; Schleich et al., 1996; Disi et al., 2001; Disi, 2002; Geniez et al., 2004; Sindaco & Jeremčenko, 2008). Baha El Din (2006, p. 81) showed that *mauritanicus* is a valid biological species that is mostly parapatric, but locally sympatric, with *sthenodactylus*. It retains its morphological and ecological differences from *sthenodactylus* even in areas of sympatry. Metallinou et al. (2012) showed that the two species can be differentiated genetically and confirmed that *mauritanicus* is distributed along the western and northern margins of the Sahara as far east as Egypt, while *sthenodactylus* is not restricted to eastern North Africa as previously believed (for example Sindaco & Jeremčenko, 2008), but has a wide distribution in the Sahara as far west as Mauritania. These two taxa, which have long been recognized as distinct but treated as subspecies, are thus best regarded as two distinct species.

4. During a revision of the nomenclatural status of the nomina available for the African species of the genus *Stenodactylus*, Metallinou & Crochet (2013) realized that specimen ZMB 437A (the lectotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823) in fact belongs to the species *Stenodactylus mauritanicus* Guichenot, 1850 (see Metallinou & Crochet, 2013, Fig. 1, for photos of the specimen). Firstly, the morphology of this specimen is typical of *S. mauritanicus*: the snout profile is strongly convex and the nostrils do not project much (see Baha El Din, 2006). Secondly, according to Bauer (2000), this specimen was collected either in 'Tscheile' (= el Achterieh, now Al Dukhaylach, 31°08'N 29°49'E according to Bauer et al., 2003) or Abusiris (an archeological site located close to Burg El Arab, 30°55'N 29°32'E). These localities are both in the mesic coastal Mediterranean area west of the Nile delta, where, according to Baha el Din (2006) and Metallinou et al. (2012), only *S. mauritanicus* occurs nowadays; *S. sthenodactylus* occurs in more xeric habitats further inland. Maintaining specimen ZMB 437A as lectotype of *Ascalabotes sthenodactylus*

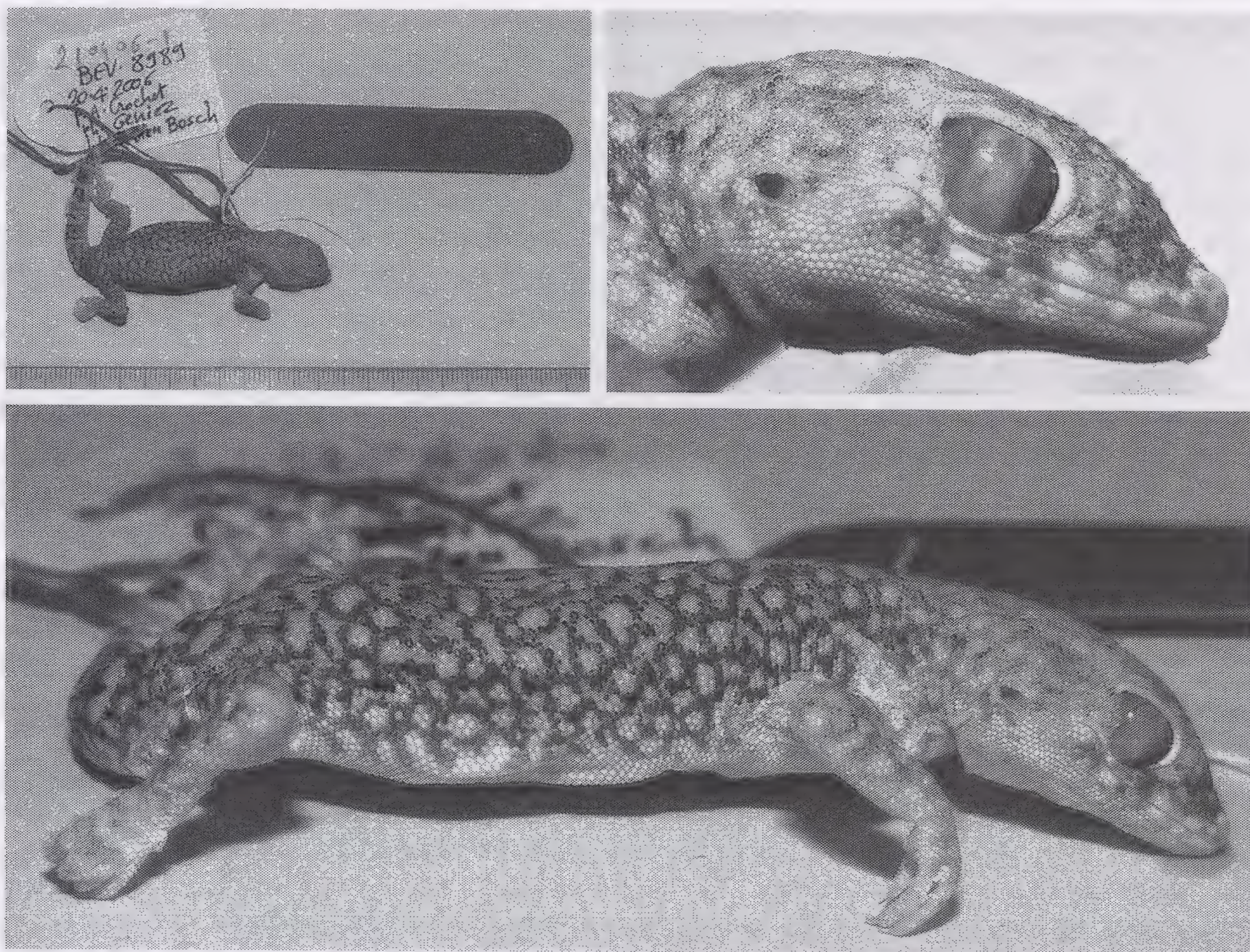


Fig. 1. Specimen MNHN 2012.0250, Muséum national d'Histoire naturelle, Paris; an adult female collected from Wadi El Natrun, Egypt (Lat: 30.4233/Long: 30.2928, elevation -10 m) proposed neotype of *Ascalabotes sthenodactylus* Lichtenstein, 1823.

would result in applying the name *S. sthenodactylus* to the mesic, coastal North African species currently known as *S. mauritanicus* (which has often been the case until recently since the validity of the taxon *mauritanicus* was not universally recognized). However, most of the populations of what was universally called *Stenodactylus sthenodactylus* until now (the inland North African species) would have to be called *Stenodactylus savignyi* (Audouin, 1827) (type locality: most likely Egypt, possibly Israel) since this is the oldest available name for this taxon (see Metallinou & Crochet, 2013). This would clearly threaten prevailing usage, hence violating Article 75.6 of the Code.

5. To maintain stability for the name *S. sthenodactylus*, we propose that the lectotype of *Ascalabotes sthenodactylus* be set aside, and a neotype be designated in accord with currently accepted usage of the name, following Article 75.6 of the Code. The proposed neotype (MNHN 2012.0250, formerly BEV.8989) comes from northern Egypt close to the original type locality. It was collected in Wadi El Natrun, 1.3 km north of the northern tip of lake az Zuqum (= Buhayrat az Zuqum = Birket d el Zugm) (Lat: 30.4233 / Long: 30.2928, elevation -10 m) on 20/04/2006 by P.-A. Crochet, P. Geniez and H. in den Bosch. It exhibits a typical *S. sthenodactylus* phenotype and mitochondrial DNA. Two nuclear genes (RAG2 and MC1R) also revealed only *S. sthenodactylus* alleles. There is a DNA sample available for this specimen (Salvador Carranza's DNA samples collection, at the Institute of Evolutionary Biology) and a tissue sample is still kept in the tissue collection of the

Biogéographie et Écologie des Vertébrés team, EPHE-UMR 5175 CEFE in Montpellier (BEV.T388). Mitochondrial and nuclear DNA sequence data for this specimen are available in GenBank (see below).

6. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to set aside all previous type fixations for *Ascalabotes sthenodactylus* Lichtenstein, 1823 and to designate as neotype specimen MNHN 2012.0250, Muséum national d'Histoire naturelle, Paris (formerly BEV.8989 from the collection of the Biogéographie et Écologie des Vertébrés team, EPHE-UMR 5175 CEFE in Montpellier); an adult female collected from Wadi El Natrun, Egypt (Lat: 30.4233/Long: 30.2928, elevation –10 m), DNA GenBank accession numbers KC190520 (12S rRNA), KC190733 (16S rRNA), KF667509 (RAG2) and KF667510 (MC1R);
- (2) to place on the Official List of Specific Names in Zoology the name *sthenodactylus* Lichtenstein, 1823, as published in the binomen *Ascalabotes sthenodactylus* and as defined by the neotype designated in (1) above.

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- Acknowledgement of receipt of this application was published in BZN **70**: 215.

Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to I.C.Z.N. Secretariat, Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).